(1) Where a superstructure is set in for a part of its length, this modification shall be applied only to the set in part.

(c) Where the height of an enclosed superstructure is less than the standard height, the effective length shall be its length reduced in the ratio of the actual height to the standard height. Where the height exceeds the standard, no increase shall be made to the effective length of the superstructure.

(d) The effective length of a raised quarter deck if fitted with an intact front bulkhead, shall be its length up to a maximum of 0.6*L*. Where the bulkhead is not intact, the raised quarter deck shall be treated as a poop of less than standard height.

(e) Superstructures which are not enclosed shall have no effective length.

[CGFR 68–60, 33 FR 10065, July 12, 1968]

### § 42.20–55 Trunks.

(a) A trunk or similar structure which does not extend to the sides of the vessel shall be regarded as efficient on the following conditions:

(1) The trunk is at least as strong as a superstructure;

(2) The hatchways are in the trunk deck, and the hatchway coamings and covers comply with the requirements of §§ 42.15–15 to 42.15–30, inclusive, and the width of the trunk deck stringer provides a satisfactory gangway and sufficient lateral stiffness; however, small access openings with watertight covers may be permitted in the freeboard deck;

(3) A permanent working platform fore and aft fitted with guard rails is provided by the trunk deck, or by detached trunks connected to superstructures by efficient permanent gangways;

(4) Ventilators are protected by the trunk by watertight covers or by other equivalent means;

(5) Open rails are fitted on the weather parts of the freeboard deck in way of the trunk for at least half their length;

(6) The machinery casings are protected by the trunk, by a superstructure of at least standard height, or by a deckhouse of the same height and of equivalent strength;

(7) The breadth of the trunk is at least 60 percent of the breadth of the vessel; and,

(8) Where there is no superstructure, the length of the trunk is at least 0.6*L*.

(b) The full length of an efficient trunk reduced in the ratio of its mean breadth to *B* shall be its effective length.

(c) The standard height of a trunk is the standard height of a superstructure other than a raised quarter deck.

(d) Where the height of a trunk is less than the standard height, its effective length shall be reduced in the ratio of the actual to the standard height. Where the height of hatchway coamings on the trunk deck is less than that required under § 42.15–25(a), a reduction from the actual height of trunk shall be made which corresponds to the difference between the actual and required height of coaming.

[CGFR 68–60, 33 FR 10065, July 12, 1968, as amended by CGFR 68–126, 34 FR 9015, June 5, 1969]

### § 42.20–60 Deduction for superstructures and trunks.

(a) Where the effective length of superstructures and trunks is 1.0*L*, the deduction from the freeboard shall be 14 inches at 79 feet length of vessel, 34 inches at 279 feet length, and 42 inches at 400 feet length and above; deductions at intermediate lengths shall be obtained by linear interpolation.

(b) Where the total effective length of superstructures and trunks is less than 1.0*L* the deduction shall be a percentage obtained from Table 42.20–60(b)(1) or Table 42.20–60(b)(2):

TABLE 42.20–60(B)(1)—PERCENTAGE OF DEDUCTION FOR TYPE "A" VESSELS

| | Total effective length of superstructures and trunks | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0.1*L* | 0.2*L* | 0.3*L* | 0.4*L* | 0.5*L* | 0.6*L* | 0.7*L* | 0.8*L* | 0.9*L* | 1.0*L* |
| Percentage of deduction for all types of superstructures[1] | 0 | 7 | 14 | 21 | 31 | 41 | 52 | 63 | 75.3 | 87.7 | 100 |

[1] Percentages at intermediate lengths of superstructures and trunks shall be obtained by linear interpolation.

TABLE 42.20–60(B)(2)—PERCENTAGE OF DEDUCTION FOR TYPE "B" VESSELS

[*Percentage of deduction* [1]]

| | Total effective length of superstructures and trunks | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Line | 0 | 0.1*L* | 0.2*L* | 0.3*L* | 0.4*L* | 0.5*L* | 0.6*L* | 0.7*L* | 0.8*L* | 0.9*L* | 1.0*L* |
| Vessels with forecastle and without detached bridge | I | 0 | 5 | 10 | 15 | 23.5 | 32 | 46 | 63 | 75.3 | 87.7 | 100 |
| Vessels with forecasle and detached bridge | II | 0 | 6.3 | 12.7 | 19 | 27.5 | 36 | 46 | 63 | 75.3 | 87.7 | 100 |

[1] Percentages at intermediate lengths of superstructures and trunks shall be obtained by linear interpolation.

(c) For vessels of Type ''B'':

(1) Where the effective length of a bridge is less than 0.2*L*, the percentages shall be obtained by linear interpolation between lines I and II;

(2) Where the effective length of a forecastle is more than 0.4*L*, the percentages shall be obtained from line II; and,

(3) Where the effective length of a forecastle is less than 0.07*L*, the percentages in Table 42.20–60(b)(2) of this paragraph shall be reduced by:

$$5(0.07L - f)/0.07L$$

*L* is the length of vessel as defined in § 42.13–15(a),

*f* is the effective length of the forecastle.

[CGFR 68–60, 33 FR 10065, July 12, 1968, as amended by CGFR 68–126, 34 FR 9015, June 5, 1969]

### § 42.20–65 Sheer.

(a) *General.* (1) The sheer shall be measured from the deck at side to a line of reference drawn parallel to the keel through the sheer line amidships.

(2) In vessels designed with a rake of keel, the sheer shall be measured in relation to a reference line drawn parallel to the design load waterline.

(3) In flush deck vessels and in vessels with detached superstructures the sheer shall be measured at the freeboard deck.

(4) In vessels with topsides of unusual form in which there is a step or break in the topsides, the sheer shall be considered in relation to the equivalent depth amidships.

(5) In vessels with a superstructure of standard height which extends over the whole length of the freeboard deck, the sheer shall be measured at the superstructure deck. Where the height exceeds the standard the least difference (*Z*) between the actual and standard heights shall be added to each end ordinate. Similarly, the intermediate ordinates at distances of 1/6*L* and 1/3*L* from each perpendicular shall be increased by 0.444Z and 0.111Z respectively.

(6) Where the deck of an enclosed superstructure has at least the same sheer as the exposed freeboard deck, the sheer of the enclosed portion of the freeboard deck shall not be taken into account.

(7) Where an enclosed poop or forecastle is of standard height with greater sheer than that of the freeboard deck, or is of more than standard height, an addition to the sheer of the freeboard deck shall be made as provided in paragraph (c)(4) of this section.

(b) *Standard sheer profile.* (1) The ordinates of the standard sheer profile are given in Table 42.20–65(b)(1):

TABLE 42.20–65(B)(1)—STANDARD SHEER PROFILE

[Where *L* is in feet]

| | Station | Ordinate (in inches) | Ordinate (in inches) | Factor |
|---|---|---|---|---|
| After half | After Perpendicular. | 0.1 ..... | *L*+10 ..... | 1 |
| | 1/6 *L* from A.P ..... | 0.0444 ... | *L*+4.44 ... | 3 |
| | 1/3 *L* from A.P ..... | 0.0111 ... | *L*+1.11 ... | 3 |
| | Amidships ..... | ..... | 0 ..... | 1 |
| Forward half. | Amidships ..... | ..... | 0 ..... | 1 |
| | 1/3 *L* from F.P ..... | 0.0222 ... | *L*+2.22 ... | 3 |
| | 1/6 *L* from F.P ..... | 0.0888 ... | *L*+8.88 ... | 3 |
| | Forward Perpendicular. | 0.2 ..... | *L*+20 ..... | 1 |

(c) *Measurement of variation from standard sheer profile.* (1) Where the sheer profile differs from the standard, the four ordinates of each profile in the forward or after half shall be multiplied by the appropriate factors given